

REMARKS

Claims 1-10 have been canceled. Thus, claims 11-60 are pending in the present application. In the Office Action, the Examiner rejected claims 1, 4, 6, 9, 11, 14, 16, 19, 21, 24, 26, 29, 41, 44, 46, and 49 under 35 U.S.C. 102(b) as being anticipated by Chalamala, et al, "Interaction of H₂O with Active Spindt-Type Molybdenum Field Emitter Arrays," J. Vac. Sci. Tech. vol. 17, pgs. 303-305, 1999, hereinafter referred to as the first Chalamala publication. The Examiner rejected claims 1, 4-6, 9-11, 14-16, 19-21, 24, 26, 29, 41, 44, 46, and 49 under 35 U.S.C. 102(b) as being anticipated by Chalamala, et al, "Effect of O₂ on the Electronic Emission Characteristics of Active Molybdenum Field Emission Cathode Arrays," J. Vac. Sci. Tech. B vol. 16, pgs. 2859-2865, 1998, hereinafter referred to as the second Chalamala publication. The Examiner rejected claims 2, 3, 7-8, 12-13, 17-18, 22-23, 25, 27-28, 30-40, 42-43, 45, 47-48, and 51-60 under 35 U.S.C. 103(a) as being unpatentable over either the first Chalamala publication or the second Chalamala publication in view of admitted prior art. Claims 1-10 have been canceled, rendering the Examiner's rejections of these claims moot. The Examiner's remaining rejections are respectfully traversed.

The first and second Chalamala publications are both concerned with the effect of residual gases on the performance of field emitter arrays. However, these references are completely silent with regard to chemical and/or biological hazards. In particular, the first and second Chalamala publications are completely silent with regard to any application of field emitter arrays to the detection, mitigation, and/or remediation of chemical and/or biological hazards. Thus, Applicants respectfully submit that the cited references fail to describe or suggest reacting at least one radical species with at least one of a chemical and a biological toxin, as set forth in independent claims 11 and 16. The cited references also fail to describe or suggest

exposing a low-power field emitter array (FEA) to at least one of a chemical and a biological toxin and dissociating the at least one of the chemical and the biological toxin exposed to at least one of a high electric field and a high electron flux formed by the low-power field inventor array (FEA), as set forth in independent claims 21, 26, 31, and 36. The cited references also fail to describe or suggest ionizing at least one of a chemical and a biological toxin exposed to at least one of a high electric field and a high electron flux, as set forth in independent claims 41, 46, 51, and 56. Thus, Applicants respectfully submit that the present invention is not anticipated by any of the cited references.

Moreover, it is respectfully submitted that the pending claims are not obvious in view of the first or second Chalamala publications in view of the admitted prior art. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. As discussed above, the first and second publications are completely silent with regard to chemical and/or biological hazards and therefore do not teach or suggest at least the limitations related to reacting, ionizing, or dissociating a biological and/or a chemical toxin. The admitted prior art also fails to teach or suggest any application of a field emitter array to the detection, mitigation, and/or remediation of chemical and/or biological hazards. Thus, Applicants respectfully submit that the Examiner has failed to make a *prime facie* case that the present invention is obvious over the cited references.

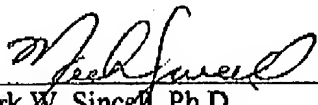
For at least the aforementioned reasons, Applicants respectfully submit that independent claims 11, 16, 21, 26, 31, 36, 41, 46, 51, 56, and all claims depending therefrom are not anticipated or rendered obvious by the first or the second Chalamala publication, either alone or in combination with the admitted prior art. Applicants respectfully request that the Examiner's rejections of claims 11-60 be withdrawn.

The Examiner is invited to contact the undersigned at (713) 934-4052 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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